

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

- 1 1. (Cancelled)
- 1 2. (Cancelled)
- 1 3. (Cancelled)
- 1 4. (Cancelled)
- 1 5. (Cancelled)
- 1 6. (Cancelled)
- 1 7. (Currently Amended) The method of claim 620, wherein the elements correspond to I/O
2 operations and background operations, and the lookup table is populated with the elements
3 corresponding to I/O operations and background operations according to time percentages
4 defining amounts of time allocated to tasks associated with such operations.
- 1 8. (Original) The method of claim 7 wherein the time percentages are user-configurable
2 parameters.

1 9. (Currently Amended) The method of claim 7 wherein allocating comprises determining
2 the indicator by determining the busy level and wherein the determined busy level is used to index
3 into the lookup table to select one of the I/O or background operations elements.

1 10. (Original) The method of claim 9 wherein the time percentages change with each row.

1 11. (Original) The method of claim 9 wherein the time percentage of the I/O operations
2 elements increases as the busy levels increase.

1 12. (Currently Amended) The method of claim ~~6~~20 wherein the I/O operations elements and
2 the background operations elements are distributed uniformly throughout a given row according
3 to their respective time percentages.

1 13. (Cancelled)

1 14. (Currently Amended) The method of claim ~~4~~20 wherein the busy ~~level is~~ levels are
2 computed at periodic intervals.

1 15. (Currently Amended) The method of claim ~~13~~20 wherein allocating comprises
2 determining the indicator by determining the busy level and wherein determining the busy level
3 comprises:
4 obtaining a most recently computed value of the busy level;

examining statistics related to idle time as well as time spent performing I/O tasks associated with I/O operations and non-I/O background tasks associated with background operations;

using the statistics to redistribute time between the idle time and the time spent performing the non-I/O background tasks to increase the time spent performing the non-I/O background tasks;

and

adjusting the last computed value of the busy level based on redistribution of time.

16. (Currently Amended) The method of claim ~~1~~20 wherein the background operations comprise pending non-I/O background tasks including data copy related activities.

17. (Currently Amended) The method of claim ~~1~~20 wherein the duration of the time slots is a user-configurable parameter.

18. (Cancelled)

19. (Cancelled)

20. (Previously Presented) A method of scheduling for use by a processor that controls storage devices of a data storage system, comprising:

allocating processing time between I/O operations and background operations for predetermined time slots based on an indicator of processor workload, wherein the indicator is an

5 indicator of I/O loading on the processor and comprises a plurality of busy levels indicative of
6 different levels of I/O loading on the processor, and wherein allocating comprises using a lookup
7 table comprising rows corresponding to the busy levels, wherein each row comprises a plurality of
8 elements corresponding to the predetermined time slots, and wherein the background operations
9 comprise pending background tasks maintained on a queue and wherein allocating further
10 comprises:

11 causing an I/O task to be selected for execution in a next one of the
12 predetermined time slots if the selected one of the I/O or background operations elements
13 is an I/O operations element; and

14 otherwise selecting a next one of the pending background tasks from the queue
15 for execution in a next one of the predetermined time slots if the selected one of the I/O or
16 background operations elements is a background operations element.